

Species Research information 004: Taxa in Hexapoda; The International Code of Zoological Nomenclature

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Circumscriptional names of higher taxa in Hexapoda

Bionomina 1: 15–55

Testing non-typified names by applying rules of circumscriptional nomenclature shows that in most cases the traditional usage can be supported. However, the original circumscription of several widely used non-typified names does not fit the taxa they are applied to. Here I discuss names historically applied to the taxa whose correct circumscriptional names should be Hexapoda, Amyocerata, Triplura, Dermatoptera, Saltatoria, Spectra, Pandictyoptera, Palaeoblattariae, Neoblattariae, Parametabola, Parasita, Arthroidignatha, Plantisuga, Metabola, Birostrata, Rhaphidioptera, Meganeuroptera, Eleuterata, Panzygothoraca, Lepidoptera and Glossolepidoptera. The new names Holopandictyoptera taxon nov., Cryptovipositoria taxon nov., Oothecophora taxon nov., Enteracantha taxon nov., and Pleuroptera taxon nov. are proposed for recognized but yet unnamed taxa.

Alain DUBOI

The International Code of Zoological Nomenclature must be drastically improved before it is too late

Bionomina, 2: 1–104

At the beginning of the century of extinctions, science has only inventoried a very small proportion of the living species of the globe. In order to face the taxonomic urgency that results from this taxonomic gap combined with the biodiversity crisis, zootaxonomy needs efficient, rigorous and automatic nomenclatural Rules, that allow to spend a minimal time on nomenclatural problems—rather than investing time, energy and money in renaming millions of already named taxa in order to follow alternative nomenclatural systems, e.g., “phylogenetic” ones, that furthermore do not show theoretical superiority to the current Linnaean-Stricklandian one. The current *Code*, result of a 250-year improvement process, is based on very sound and healthy Rules, being theory-free regarding taxonomy, relying on objective allocation of nomina to taxa by a system of ostension using onomatophores, and on an objective basic Principle, priority, for recognizing the valid nomen of a taxon in case of synonymy or homonymy. Nevertheless, this nomenclatural system is certainly not perfect. It should be modified at least in nine directions: (1) it should adopt a technical terminology avoiding possible misinterpretations from outsiders of the field and even from specialists, and allowing a precise formalisation of its mode of functioning; (2) its plan should be drastically modified; (3) its Principles should be redefined, and some added; (4) material evidence for the allocation of nomina to taxa through specimens deposited in permanent collections should be given more

weight; (5) it should incorporate all nomina of higher taxa, providing clear and strict universal Rules for their naming, whereas conserving the traditional nomina largely used in non-specialized systematic literature; (6) it should allow for the recognition of many more ranks at lower nomenclatural levels, i.e., just above genus, between genus and species, and below species; (7) it should provide much more stringent Rules for the protection against priority of "wellknown" nomina or sozymons; (8) various "details" should be addressed, various Rules and Recommendations changed before a new edition of the *Code* is published; (9) the procedure of implementations of changes in the *Code* should be modified in order to involve zootaxonomists of the whole world in the decisions. In several instances, the Rules of the *Code* should become much more compulsory for all zoologists, editors and publishers, to avoid the publication of endless and sometimes most detrimental discussions among taxonomists which give a poor image of nomenclature and taxonomy among the biological sciences, such as bitter discussions about the "best" nomen to be used under a so-called "usage" philosophy, or about nomina to be applied to higher taxa. *Code*-compliance in zootaxonomic publications should be highlighted, and editors and publishers should require from authors who follow alternative nomenclatural Rules (or no rule at all) to make it clear by using particular modes of writing their nomina. It is argued here that if the *Code* of the 21st century does not evolve to incorporate these changes, it will prove unable to play its role in front of several important recent theoretical and practical developments of taxonomy and run the risk of being abandoned by a part of the international community of zootaxonomists. The latter could then adopt alternative "phylogenetic" nomenclatural Rules, despite the severe practical problems and theoretical flaws posed by such projects. This would be most detrimental for all comparative biological disciplines including systematics, and even for the unity of biology. In the course of this discussion, a few recommendations are given concerning the standards and guidelines suggested by recent authors for a good, modern, integrative taxonomy.